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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Morys et al. Confirmation No.: 9554
Serial No.: 10/713,923 Art Unit: 2859
Filed: February 11, 2003 Examiner: Brij B. Shrivastav
For: SYSTEM AND METHOD OF Attorney Docket No: 7420-116-999
DETERMINING MOTION TOOL
PARAMETERS IN BOREHOLE
LOGGING

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure provisions of 37 C.F.R. §1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the application.

1. Enclosures accompanying this Information Disclosure Statement are:

- 1a. ☒ A list of all patents, publications, applications, or other information submitted for consideration by the office.
- 1b. A legible copy of :
- ☒ Each publication or that portion which caused it to be listed on the PTO-1449;
- ☐ For each cited pending U.S. application filed before June 30, 2003, the application specification including the claims, and any drawing of the application, or portion of the application which caused it to be listed on the PTO-1449 including any claims directed to that portion;
- ☐ all other information or portion which caused it to be listed on the PTO-1449.
- 1c. ☐ An English language copy of search report(s) from a counterpart foreign application or PCT International Search Report.
- 1d. ☐ Explanations of relevancy (ATTACHMENT 1(d), hereto) or English language abstracts of the non-English language publications.
- 1e. ☒ Pursuant to 37 C.F.R. § 1.98(a)(2)(ii), copies of the cited U.S. patents and U.S. patent application publications are not submitted herewith.

2. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(b):

- ☐ Within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
- ☐ Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
- ☐ Before the mailing of the first Office action on the merits;
- ☐ Before the mailing of a first Office action after the filing of a request for continued examination under §1.114.

3. ☒ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(c) after the period specified in 37 C.F.R. §1.97(b), but before the mailing date of any of a final action under 37 C.F.R. §1.113, a notice of allowance under 37 C.F.R. §1.311 or an action that otherwise closes prosecution in the application.

(Check either Item 3a or 3b)

- 3a. ☐ The Certification Statement in Item 5 below is applicable. Accordingly, no fee is required.
- 3b. ☒ The \$180.00 fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is:
- ☐ enclosed
 - ☒ to be charged to Jones Day Deposit Account No. 50-3013.

(Item 3b to be checked if any reference known for more than 3 months)

4. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(d) after the period specified in 37 C.F.R. §1.97(c), but on or before the date of payment of the issue fee.

The Certification Statement in Item 5 below is applicable.

- The \$180.00 fee set forth in 37 C.F.R. §1.17(p) is:
- ☐ enclosed.
 - ☐ to be charged to Jones Day Deposit Account No. 50-3013

5. ☐ Certification Statement (applicable if Item 3a or Item 4 is checked)

(Check either Item 5a or 5b)

- 5a. ☐ In accordance with 37 C.F.R. §1.97(e)(1), it is certified that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- 5b. ☐ Each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- 5c. ☐ Pursuant to 37 C.F.R. §1.704(d), each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not **received** by any individual designated in 37 C.F.R. §1.56(c) more than thirty days prior to the filing of this information disclosure statement.

6. ☐ This application is a continuation application under 37 C.F.R. §1.53(b) or (d).

(Check appropriate Items 6a, 6b and/or 6c)

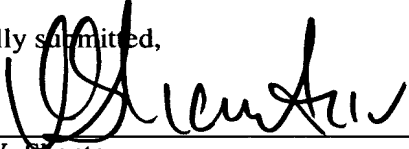
- 6a. ☐ A Petition to Withdraw from issue under 37 C.F.R. §1.313(b)(5) is concurrently filed herewith.
- 6b. ☐ Copies of publications listed on Form PTO-1449 from prior application Serial No. _____, filed on _____, of which this application claims priority under 35 U.S.C. §120, are not being submitted pursuant to 37 C.F.R. §1.98(d).
- 6c. ☐ Copies of the publications listed on Form PTO-1449 were not previously cited in prior application Serial No. _____, filed on _____, and are provided herewith.
7. ☐ This is a Supplemental Information Disclosure Statement. (Check Item 7a)
- 7a. ☐ This Supplemental Information Disclosure Statement under 37 C.F.R. §1.97(f) supplements the Information Disclosure Statement filed on _____. A bona fide attempt was made to comply with 37 C.F.R. §1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental Information Disclosure Statement can be considered as if properly filed on _____.
8. ☐ In accordance with 37 C.F.R. §1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:

(Check Item 8a, 8b, or 8c)

- 8a. ☐ satisfied because all non-English language publications were cited on the enclosed English language copy of the PCT International Search Report or the search report from a counterpart foreign application indicating the degree of relevance found by the foreign office.
- 8b. ☐ set forth in the application.
- 8c. ☐ enclosed as an attachment hereto.
9. ☒ The Commissioner is authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement and/or Petition to Jones Day Deposit Account No. 50-3013.
10. ☒ No admission is made that the information cited in this Statement is, or is considered to be, material to patentability and no representation is made that a search has been made (other than a search report of a foreign counterpart application or PCT International Search Report if submitted herewith). 37 C.F.R. §§1.97(g) and (h).

Respectfully submitted,

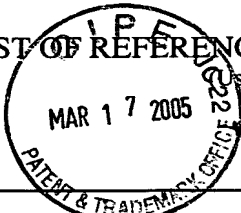
Date: March 17, 2005



Ognian V. Shentov
JONES DAY
222 East 41st Street
New York, New York 10017
(212) 326-3939

38,051

(Reg. No.)

 <p>LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)</p>	ATTY. DOCKET NO. 7420-116-999	APPLICATION NO. 10/713,923
	APPLICANT Morys et al.	
	FILING DATE February 11, 2003	GROUP 2859

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	6,737,864	05/18/04	Prammer <i>et al.</i>	324	303	
	AB	6,661,226	12/09/03	Hou <i>et al.</i>	324	303	
	AC	6,646,437	11/11/03	Chitale <i>et al.</i>	324	303	
	AD	6,577,125	06/10/03	Prammer <i>et al.</i>	324	303	
	AE	6,541,969	04/01/03	Sigal <i>et al.</i>	324	303	
	AF	6,531,868	03/11/03	Pramemr	324	303	
	AG	6,525,534	02/25/03	Akkurt <i>et al.</i>	324	303	
	AH	6,518,758	02/11/03	Speier <i>et al.</i>	324	303	
	AI	6,268,726	07/31/01	Prammer <i>et al.</i>	324	303	
	AJ	6,255,819	07/03/01	Day <i>et al.</i>	324	303	
	AK	6,008,646	12/28/99	Griffin <i>et al.</i>	324	303	
	AL	6,005,389	12/21/99	Prammer	324	303	
	AM	5,992,519	11/30/99	Ramakrishnan <i>et al.</i>	166	250.15	
	AN	5,977,768	11/02/99	Sezginer <i>et al.</i>	324	303	
	AO	5,914,598	06/02/99	Sezginer <i>et al.</i>	324	303	
	AP	5,869,755	02/09/99	Ramamoorthy <i>et al.</i>	73	152.05	
	AQ	5,565,775	10/15/96	Stallmach <i>et al.</i>	324	303	
	AR	5,557,201	09/17/96	Kleinberg <i>et al.</i>	324	303	
	AS	5,557,200	09/17/96	George R. Coates	324	303	
	AT	5,517,115	05/14/96	Prammer	324	303	
	AU	5,498,960	03/12/96	Vinegar <i>et al.</i>	324	303	
	AV	5,497,087	03/05/96	Vinegar <i>et al.</i>	324	303	
	AW	5,486,762	01/23/96	Freedman <i>et al.</i>	324	303	
	AX	5,486,761	01/23/96	Sezginer	324	303	
	AY	5,432,446	07/11/95	Macinnis <i>et al.</i>	324	303	
	AZ	5,412,320	05/02/95	Coates	324	303	
	BA	5,387,865	02/07/95	Jerosch-Herold <i>et al.</i>	324	303	
	BB	5,381,092	01/10/95	Robert Freedman	324	303	

	BC	5,379,216	01/03/95	Elton L. Head	364	422	
	BD	5,376,884	12/27/94	Abdurrahman Sezginer	324	303	
	BE	5,363,041	11/08/94	Sezginer	324	303	
	BF	5,350,925	09/27/94	Charles C. Watson	250	269.3	
	BG	5,349,184	09/20/94	Peter D. Wraight	250	266	
	BH	5,309,098	05/03/94	Coates <i>et al.</i>	324	303	
	BI	5,280,243	01/18/94	Miller	324	303	
	BJ	5,212,447	05/18/93	Paltiel	324	300	
	BK	5,122,746	06/16/92	King <i>et al.</i>	324	307	
	BL	5,055,788	10/08/91	Kleinberg <i>et al.</i>	324	303	
	BM	5,055,787	10/08/91	Kleinberg <i>et al.</i>	324	303	
	BN	5,023,551	06/11/91	Kleinberg <i>et al.</i>	324	303	
	BO	4,933,638	06/12/90	Kenyon <i>et al.</i>	324	303	
	BP	4,728,892	03/01/88	Vinegar <i>et al.</i>	324	309	
	BQ	4,717,878	01/05/88	Taicher <i>et al.</i>	324	303	
	BR	4,717,877	01/05/88	Taicher <i>et al.</i>	324	303	
	BS	4,717,876	01/05/88	Masi <i>et al.</i>	324	303	
	BT	4,710,713	12/01/87	Taicher <i>et al.</i>	324	303	
	BU	4,885,540	12/05/89	Snoddy <i>et al.</i>	324	318	
	BV	4,686,364	08/11/87	Susan L. Herron	250	256	
	BW	4,528,508	07/09/85	William B. Vail, III	324	303	
	BX	4,310,887	01/12/82	Jean A. Suau	364	422	
	BY	3,896,668	07/29/75	Anderson <i>et al.</i>	73	152	
	BZ	3,784,898	01/08/74	Darley <i>et al.</i>	324	0.5R	
	CA	3,777,560	12/11/73	Jean-Hubert Guignard	73	151.5	
	CB	3,667,035	05/30/72	Charles P. Slichter	324	0.5R	
	CC	3,657,730	04/18/72	Robinson <i>et al.</i>	324	0.5	
	CD	3,638,484	02/01/72	Maurice P. Tixier	73	152	
	CE	3,617,867	11/02/71	Gerherd Herzog	324	0.5	
	CF	3,593,116	07/13/71	Willie C. Culpepper	324	0.5	
	CG	3,590,228	06/29/71	Jack A. Burke	235	151.35	
	CH	3,567,936	03/02/71	Jay Tittman	250	83.1	
	CI	3,567,935	03/02/71	Walter A. Nagel	250	83.1	
	CJ	3,508,438	04/28/70	Alger <i>et al.</i>	73	152	

	CI	3,453,433	07/01/69	Alger <i>et al.</i>	250	83.3		
	CJ	3,402,344	08/02/65	Brown <i>et al.</i>				
	CK	3,395,337	01/03/52	R. H. Varian				
	CL	3,360,716	08/06/56	Bloom <i>et al.</i>				
	CM	3,213,357	10/19/65	Brown <i>et al.</i>				NO
	CN	3,205,477	09/07/65	D. C. Kalbfell				
	CO	1,158,959	11/02/15	E. W. Beach				
	CP	Re. 32,913	04/25/89	Brian Clark	324	338		

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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	YES
	CR	WO 98/25164	11/26/97	International Application				

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	CS	Morriss <i>et al.</i> , "Hydrocarbon Saturation and Viscosity Estimation from NMR Logging in the Belridge Diatomite," 35th SPWLA Annual Logging Symposium (June 19-22, 1994), pp. 1-24.
	CT	Carr <i>et al.</i> , "Effects of Diffusion on Free Precision in Nuclear Magnetic Resonance Experiments," <i>Physical Review</i> , Vol. 94. No. 3 (May 1, 1954), pp. 630-638.
	CU	<i>Schlumberger Wireline & Testing</i> , "Combinable Magnetic Resonance tool reliably indicates water-free production and reveals hard-to-find pay zones," (June 1995).
	CV	Morriss <i>et al.</i> , "Field Test of an Experimental Pulsed Nuclear Magnetism Tool," SPWLA Annual Logging Symposium (June 13-16, 1993), pp. 1-23.
	CW	Coates <i>et al.</i> , "Core Data and the MRIL Show - A New Approach to 'Formation Factor,'" National SPWLA Convention (June 15, 1992), pp. 1-15.
	CX	Kleinberg <i>et al.</i> , "Novel NMR Apparatus for Investigating an External Sample," <i>Journal of Magnetic Resonance</i> , (1992) pp. 466-485.
	CY	Coates <i>et al.</i> , "An Investigation of a New Magnetic Resonance Imaging Log," National SPWLA Convention (June 18, 1991), pp. 1-24.
	CZ	Howard <i>et al.</i> , "Proton Magnetic Resonance and Pore-Size Variations in Reservoir Sandstones," <i>Society of Petroleum Engineers</i> (1990), pp. 733-741.
	DA	Miller <i>et al.</i> , "Spin Echo Magnetic Resonance Logging: Porosity and Free Fluid Index Determination," <i>Society of Petroleum Engineers</i> (1990), pp. 321-334.
	DB	Kenyon <i>et al.</i> , "Pore-Size Distribution and NMR in Microporous Cherty Sandstones," SPWLA Thirtieth Annual Logging Symposium (June 11-14, 1989), pp. 1-24.
	DC	<i>Schlumberger Technology News - Oilfield Bulletin</i> , "Fifth Generation Nuclear Magnetic Resonance Logging Tool: A Major Advance in Producibility Measurement Technology," (July 1995) (2 pp.)

	DD	Akkurt <i>et al.</i> , "NMR Logging of Natural Gas Reservoirs," SPWLA 35th Annual Logging Symposium (June 26-29, 1995)
	DE	Prammer, M.G., "NMR Pore Size Distributions and Permeability at the Well Site," <i>Society of Petroleum Engineers</i> (9/25/95) pp. 55-64.
	DF	Chandler <i>et al.</i> , "Improved Log Quality with a Dual-Frequency Pulsed NMR Tool," <i>Society of Petroleum Engineers</i> (1994) pp. 23-35.
	DG	Straley <i>et al.</i> , "NMR in Partially Saturated Rocks: Laboratory Insights on Free Fluid Index and Comparison with Borehole Logs," SPWLA Annual Logging Symposium (June 27, 1991) pp. 40-56.
	DH	Gallegos <i>et al.</i> , "A NMR Technique for the Analysis of Pore Structure: Determination of Continuous Pore Size Distributions," <i>Journal of Colloid and Interface Science</i> , Vol. 122, No. 1, March 1988, pp. 143-153.
	DI	Gallegos <i>et al.</i> , "A NMR Technique for the Analysis of Pore Structure: Application to Materials with Well-Defined Pore Structure," <i>Journal of Colloid and Interface Science</i> , Vol. 119, No. 1, September 1987, pp. 127-140.
	DJ	Jackson <i>et al.</i> , "Western Gas Sands Project Los Alamos NMR Well Logging Tool Development," Los Alamos National Laboratory (October 1981 - September 1982) pp. 1-28.
	DK	Clavier <i>et al.</i> , "The Theoretical and Experimental Bases for the 'Dual Water' Model for the Interpretation of Shaly Sands," <i>Journal of Petroleum Technology</i> (April 1984), pp. 3-15.
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	DM	Farrar <i>et al.</i> , "Pulse and Fourier Transform NMR Introduction to Theory and Methods," Academic Press (1971) pp. 26-29.
	DN	Waxman <i>et al.</i> , "Electrical Conductivities in Oil-Bearing Shaly Sands," <i>Society of Petroleum Engineers Journal</i> (1968) pp. 107-122.
	DO	Brown <i>et al.</i> , "Nuclear Magnetism Logging," <i>Transactions of the American Institute of Mining, Metallurgical, and Petroleum Engineers</i> , Vol. 219 (1960), pp. 199-207.
EXAMINER		DATE CONSIDERED
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>		